TELEDYNE ANALYTICAL INSTRUMENTS

MODEL 3350

Control Room Oxygen Monitor

Personnel safety is a primary issue in nearly every industry, and no factor is of greater importance than assuring an appropriate level of oxygen in an enclosed area. Teledyne's Model 3350 Control Room Oxygen Monitor accurately measures the concentration of oxygen in control rooms, closed atmospheres, critical breathing circuits, and other applications that require the fail-safe monitoring of breathable, ambient air.

Simple to use and maintain, this unit shoulders the burden of personnel safety with the quality and reliability offered by the Teledyne name.

The 3350 is a microprocessor-based oxygen alarm monitor for real-time measurement of the oxygen content of the atmosphere surrounding its sensor. The standard instrument is configured to run from an AC power source and is also available with an optional, continuously charging, DC battery backup. The rated battery life is approximately 17 hours configured in failsafe mode and 48 hours in non-failsafe mode.

DUAL OXYGEN ALARMS

The alarm setpoints provide an operational band that covers all acceptable oxygen concentrations. If the oxygen level at the sensor crosses the adjusted setpoint of one of the alarms, that alarm will cause the switching of relay contacts.

Designed in consideration of OSHA specifications, the standard factory setting of the two alarms provides a CAUTION alarm at 20% oxygen and a DANGER alarm at 19.5% oxygen. To cover special situations, a limited amount of adjustment is possible. Both alarm setpoints are factory set (internal) to prevent tampering or resetting by unauthorized personnel.

When an insufficient oxygen concentration triggers either alarm, a red panel light and an audible annunciator are energized. The alarms remain energized until the oxygen concentration has been elevated above the trigger point.

BATTERY BACKED STANDBY POWER

An optional Battery Backed Standby Power Configuration is offered for potential power failure or "brown out" conditions. With this feature, power outages will not interfere with a properly working alarm. The standby power source uses a rechargeable lead acid battery. If the AC power is interrupted, the stand-by power supply automatically supports analyzer operation. Periodic testing of the battery pack is possible through a simple pushbutton inside the instrument's control panel.

MAINTENANCE-FREE SENSOR

The 3350 uses a patented Micro-fuel Cell to measure the concentration of oxygen in breathable air. This sensor is a sealed electrochemical transducer with no electrolyte to change or electrodes to clean, so it is virtually maintenance free. When it reaches the end of its useful life, it is easily replaced.

SIMPLE CALIBRATION

Periodic calibration is quickly and easily accomplished with no specialty gas requirements. The Micro-fuel Cell produces a linear output from zero to 100% oxygen so ambient air or readily available instrument grade air (20.9% oxygen) can be economically used for calibration. Also, since the Micro-fuel Cell has an absolute zero, no zero gases are needed.

EASY TO INSTALL

The 3350 is designed for easy installation. Mount the unit to a wall or bulkhead, connect AC power, and the installation is complete. The unit is lightweight with a slim profile, eliminating the need for special reinforcement in most installations. (Note: Teledyne recommends consulting a safety expert to select a suitable location for installation.)

REMOTE PROBE AVAILABLE

A special version of the 3350 is available with a remote-mountable oxygen probe. This option permits the user to install the oxygen probe inside the control room, while the control unit is mounted outside. This allows personnel to see the analyzer and confirm a safe level of ambient oxygen is present before entering the control room.

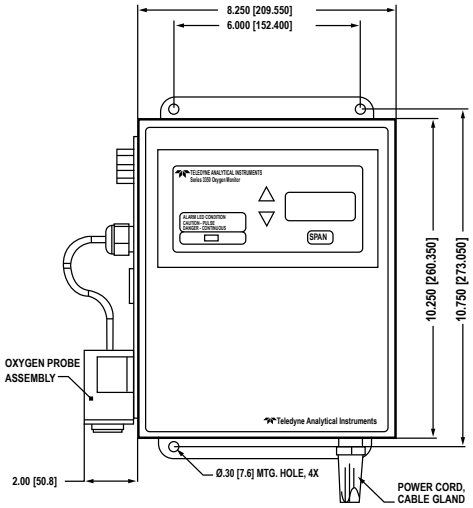
SERIES 3350 CONTROL ROOM OXYGEN MONITOR

FEATURES

- Large, bright, LED meter readout
- Nylon cell holder
- Audible and visual alarm indicators
- Simple pushbutton controls
- Long-life, maintenance-free Micro-fuel Cell oxygen sensor
- Unaffected by oxidizing gases
- Fast response and recovery time
- Microprocessor based electronics
- Air calibration range for convenient spanning at 20.9% oxygen
- Two factory preset alarms, Form C relay contacts, configured as failsafe or non-failsafe
- Two analog outputs: two for measurement (0-10 Vdc and negative ground 4-20 mA)
- Compact and rugged, wall mounted NEMA-4 rated enclosure
- CE Mark approval

OPTIONS

- Battery back-up
- Power requirement:
  100 / 220VAC,
  50 / 60 Hz
- Special ranges
- Special remote probe
- Provisions for conduit-in power connection



SPECIFICATIONS

Range:	0-25% oxygen
Sensitivity:	0.5% of full scale
Accuracy:	±2% of full scale at constant temperature; ±5% of full scale (over operating temperature range, once the system has reached equilibrium at a constant temperature)
Response time:	90% in less than 20 seconds at 25°C
Operating and storage temperature:	32 to 122°F (0 to 50°C)
Relative humidity:	0-95% non-condensing
Maximum altitude:	6562 feet (2000 meters)
Reproducibility:	±1% of full scale
Sensor type:	B-3 class Micro-fuel Cell
Display:	LED
Battery life:	48 hours (non-alarm conditions) non-failsafe 17 hours (non- alarm conditions) failsafe
Power requirements:	AC 100 to 240 Vac @ 50/60 Hz, 0.3A Max; battery backup version charges and maintains a 12 VDC lead acid battery
Signal output:	Voltage: 0-10 VDC, negative ground (10mA max) Current: 4-20 mA, negative ground (15V max open circuit) 10 VDC / 500 ohms maximum operating range
Audible alarm:	12-15 VDC, 4.3 mA max
Enclosure:	Wall mounting, NEMA-4 enclosure
Dimensions:	8" wide x 10" high x 6" deep (20.3 x 25.4 x 15.2 cm)
Alarms:	
Factory set:	Caution - 20.0% Danger - 19.5%
Sensor failure:	Audible - buzzer Visual - red indicator lamps

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Warranty

Instrument is warranted for 1 year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

ISO 9001:2000 – QMS

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